

## **ABSTRACT OF THE DISCLOSURE**

In a method for the intraoperative generating of an updated volume dataset, a first volume dataset is reconstructed from a series of  $n$  2D X-ray projections (of a patient that are acquired at different angles. During a medical intervention,  $m$  2D X-ray projections ( $m < n$ ) of the patient are acquired from different angles. In a first version of the method,  $m$  2D X-ray projections of the series of  $n$  2D X-ray projections are replaced by the intraoperatively acquired  $m$  2D X-ray projections, and an updated volume dataset is reconstructed using the intraoperatively acquired  $m$  2D X-ray projections and  $n-m$  2D X-ray projections that were not replaced in the series of  $n$  2D X-ray projections. In a second version of the method, a second volume dataset is reconstructed with the intraoperatively acquired  $m$  2D X-ray projections and is fused with the first volume dataset to form an updated volume dataset.

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